SEQUENCE LISTING

(1) GENERAL INFORMATION:

(i) APPLICANT: Murphy, Brian R.
Collins, Peter L.
Whitehead, Stephen S.
Bukreyev, Alexander A.
Juhasz, Katalin

(ii) TITLE OF INVENTION: PRODUCTION OF ATTENUATED RESPIRATORY SYNCYTIAL VIRUS VACCINES FROM CLONED NUCLEOTIDE SEQUENCES

(iii) NUMBER OF SEQUENCES: 14

(iv) CORRESPONDENCE ADDRESS:
(A) ADDRESSEE: Townsend and Townsend and Crew LLP
(B) STREET: Two Embarcadero Center, 8th Floor
(C) CITY: San Francisco
(D) STATE: CA
(E) COUNTRY: USA
(F) ZIP: 94111-3834

(v) COMPUTER READABLE FORM:
(A) MEDIUM TYPE: Floppy disk
(B) COMPUTER: IBM PC compatible
(C) OPERATING SYSTEM: PC-DOS/MS-DOS
(D) SOFTWARE: PatentIn Release #1.0, Version #1.25

(vi) CURRENT APPLICATION DATA:
(A) APPLICATION NUMBER: US
(B) FILING DATE: 15-JUL-1997
(C) CLASSIFICATION:

(vii) PRIOR APPLICATION DATA:
(A) APPLICATION NUMBER: US 60/047,634
(B) FILING DATE: 23-MAY-1997

(vii) PRIOR APPLICATION DATA:
(A) APPLICATION NUMBER: US 60/046,141
(B) FILING DATE: 09-MAY-1997

(vii) PRIOR APPLICATION DATA:
(A) APPLICATION NUMBER: US 60/021,773
(B) FILING DATE: 15-JUL-1996

(viii) ATTORNEY/AGENT INFORMATION:
(A) NAME: Parmelee, Steven W.
(B) REGISTRATION NUMBER: 31,990
(C) REFERENCE/DOCKET NUMBER: 17634-000510

(ix) TELECOMMUNICATION INFORMATION:
(A) TELEPHONE: 206-467-9600
(B) TELEFAX: 415-576-0300

(2) INFORMATION FOR SEQ ID NO:1:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 15223 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: cDNA

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:1:

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(2) INFORMATION FOR SEQ ID NO:2:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 15225 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: cDNA

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:2:

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GCACTTAAAT CTGGATCTAA CATCAATTCT AATTTAATAT TAGTACATAA AATGTCTGAT 12960
TATTTTCATA ATGCTTATAT TTTAAGTACT AATTTAGCTG GACATTGGAT TCTAATTATT 13020
CAACTTATGA AAGATTCAAA AGGTATTTTT GAAAAAGATT GGGGAGAGGG GTACATAACT 13080
GATCATATGT TCATTAATTT GAATGTTTTC TTTAATGCTT ATAAGACTTA TTTGCTATGT 13140
TTTCATAAAG GTTATGGTAA AGCAAAATTA GAATGTGATA TGAACACTTC AGATCTTCTT 13200
TGTGTTTTGG AGTTAATAGA CAGTAGCTAC TGGAAATCTA TGTCTAAAGT TTTCCTAGAA 13260
CAAAAAGTCA TAAAATACAT AGTCAATCAA GACACAAGTT TGCATAGAAT AAAAGGCTGT 13320
CACAGTTTTA AGTTGTGGTT TTTAAAACGC CTTAATAATG CTAAATTTAC CGTATGCCCT 13380
TGGGTTGTTA ACATAGATTA TCACCCAACA CATATGAAAG CTATATTATC TTACATAGAT 13440
TTAGTTAGAA TGGGGTTAAT AAATGTAGAT AAATTAACCA TTAAAAATAA AAACAAATTC 13500
AATGATGAAT TTTACACATC AAATCTCTTT TACATTAGTT ATAACTTTTC AGACAACACT 13560
CATTTGCTAA CAAAACAAAT AAGAATTGCT AATTCAGAAT TAGAAGATAA TTATAACAAA 13620
CTATATCACC CAACCCCAGA AACTTTAGAA AATATATCAT TAATTCCTGT TAAAAGTAAT 13680

AATAGTAACA AACCTAAATT TTGTATAAGT GGAAATACCG AATCTATAAT GATGTCAACA 13740

TTCTCTAATA AAATGCATAT TAAATCTTCC ACTGTTACCA CAAGATTCAA TTATAGCAAA 13800

CAAGACTTGT ACAATTTATT TCCAAATGTT GTGATAGACA GGATTATAGA TCATTCAGGT 13860

AATACAGCAA AATCTAACCA ACTTTACATC ACCACTTCAC ATCAGACATC TTTAGTAAGG 13920

AATAGTGCAT CACTTTATTG CATGCTTCCT TGGCATCATG TCAATAGATT TAACTTTGTA 13980

TTTAGTTCCA CAGGATGCAA GATCAGTATA GAGTATATTT TAAAAGATCT TAAGATTAAG 14040

GACCCCAGTT GTATAGCATT CATAGGTGAA GGAGCTGGTA ACTTATTATT ACGTACGGTA 14100

GTAGAACTTC ATCCAGACAT AAGATACATT TACAGAAGTT TAAAAGATTG CAATGATCAT 14160

AGTTTACCTA TTGAATTTCT AAGATTATAC AACGGGCATA TAAACATAGA TTATGGTGAG 14220

AATTTAACCA TTCCTGCTAC AGATGCAACT AATAACATTC ATTGGTCTTA TTTACATATA 14280

AAATTTGCAG AACCTATTAG CATCTTTGTC TGCGATGCTG AATTACCTGT TACAGCCAAT 14340

TGGAGTAAAA TTATAATTGA ATGGAGTAAG CATGTAAGAA AGTGCAAGTA CTGTTCTTCT 14400

GTAAATAGAT GCATTTTAAT CGCAAAATAT CATGCTCAAG ATGATATTGA TTTCAAATTA 14460

GATAACATTA CTATATTAAA AACTTACGTG TGCCTAGGTA GCAAGTTAAA AGGATCTGAA 14520

GTTTACTTAG TCCTTACAAT AGGCCCTGCA AATATACTTC CTGTTTTTGA TGTTGTGCAA 14580

AATGCTAAAT TGATTTTTTC AAGAACTAAA AATTTCATTA TGCCTAAAAA AACTGACAAG 14640

GAATCTATCG ATGCAAATAT TAAAAGCTTA ATACCTTTCC TTTGTTACCC TATAACAAAA 14700

AAAGGAATTA AGACTTCATT GTCAAAATTG AAGAGTGTAG TTAATGGGGA TATATTATCA 14760

TATTCTATAG CTGGACGTAA TGAAGTATTC AGCAACAAGC TTATAAACCA CAAGCATATG 14820

AATATCCTAA AATGGCTAGA TCATGTTTTA AATTTTAGAT CAGCTGAACT TAATTACAAT 14880

CATTTATACA TGATAGAGTC CACATATCCT TACTTAAGTG AATTGTTAAA TAGTTTAACA 14940

ACCAATGAGC TCAAGAAACT GATTAAAATA ACAGGTAGTG TACTATACAA CCTTCCCAAC 15000

GAACAGTAAC TTAAAATATC ATTAACAAGT TTGGTCAAAT TTAGATGCTA ACACATCATT 15060

ATATTATAGT TATTAAAAAA TATGCAAACT TTTCAATAAT TTAGCTTACT GATTCCAAAA 15120

TTATCATTTT ATTTTTAAGG GGTTGAATAA AAGTCTAAAA CTAACAATGA TACATGTGCA 15180

TTTACAACAC AACGAGACAT TAGTTTTTGA CACTTTTTTT CTCGT 15225

(2) INFORMATION FOR SEQ ID NO:3:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 33 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: cDNA

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:3:

ACTCAAATAA GTTAATAAAA AATATCCCGG GAT 33

(2) INFORMATION FOR SEQ ID NO:4:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 31 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: cDNA

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:4:

CCCGGGATAT TTTTTATTAA CTTATTTGAG T 31

(2) INFORMATION FOR SEQ ID NO:5:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 18 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: cDNA

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:5:

GAAAGTATAT ATTATGTT 18

(2) INFORMATION FOR SEQ ID NO:6:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 20 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: cDNA

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:6:

TATATAAGCA CGATGATATG 20

(2) INFORMATION FOR SEQ ID NO:7:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 16 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: cDNA

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:7:

ACTCAAATAA GTTAAT 16

(2) INFORMATION FOR SEQ ID NO:8:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 14 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: cDNA

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:8:

TAACTTATTT GAGT 14

(2) INFORMATION FOR SEQ ID NO:9:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 28 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: cDNA

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:9:

GACACAACCC ACAATGATAA TACACCAC 28

(2) INFORMATION FOR SEQ ID NO:10:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 32 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: cDNA

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:10:

CATCTCTAAC CAAGGGAGTT AAATTTAAGT GG 32

(2) INFORMATION FOR SEQ ID NO:11:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 27 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: cDNA

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:11:

TTAAGGAGAG ATATAAGATA GAAGATG 27

(2) INFORMATION FOR SEQ ID NO:12:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 27 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: cDNA

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:12:

GTTTTATATT AACTAATGGT GTTAGTG 27

(2) INFORMATION FOR SEQ ID NO:13:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 33 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: cDNA

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:13:

TTATAATTGC AGCCATCATA TTCATAGCCT CGG 33

(2) INFORMATION FOR SEQ ID NO:14:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 30 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: cDNA

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:14:

GTGAAGTTGA GATTACAATT GCCAGAATGG 30